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TO THE QUESTION OF SOCIAL CAPITAL MEASURMENT: ANALYSIS OF APPROACHES

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The article provides a comparative review of recent measurement techniques and approaches to define social capital. Analysis of social capital on the individual level is based on such elements as the embedded resources and the locations of individuals in a social network. Various combinations of dimensions of Social Capital Assessment Tool are presented on the group level of analysis of social capital. The weak and strong sides of World Bank Initiatives are shown.

Key words: social capital, measurement techniques, position generator, name generator, resource generator, social capital index.

Стаття присвячена розгляду підходів до визначення та вимірювання соціального капіталу на індивідуальному та груповому рівнях. В зв'язку з відсутністю єдиного визначення терміну соціального капіталу, в статті розглянуто найбільш розповсюдженні шляхи вимірювання даного феномену. Розгляд соціального капіталу як індивідуального ресурсу зосереджується на вивчанні позиції індивідів у соціальній мережі. Аналіз соціального капіталу як групового ресурсу має на меті вивчення комбінацій індикаторів, уживаних під час дослідження Ініціатив Всесвітнього Банку.

Ключові слова: соціальний капітал, техніки вимірювання, генератор позицій, генератор імен, генератор ресурсів, індекс соціального капіталу.

Статья посвящена рассмотрению подходов к определению и измерению социального капитала на индивидуальном и групповом уровне. В связи с отсутствием общепринятого определения социального капитала, статья рассматривает наиболее распространенные пути измерения данного феномена. При рассмотрении социального капитала как личностного ресурса внимание уделяется позиции индивидов в социальной сети. Изучение социального капитала как группового ресурса сводится к анализу комбинаций индикаторов, использованных при исследовании Инициатив Всемирного Банка.

Ключевые слова: социальный капитал, техники измерения, генератор позиций, генератор имен, генератор ресурсов, индекс социального капитала.

Many scholars emphasize that the variety of definitions and interpretations of social capital concept leads to the theoretical and measurements controversy (Lin 1999, Healy 2003,). Narayan and Cassidy [1,p. 61] state that "at operational level the interpretations of what social capital is and is not are diverse". As a result, the "measurements of social capital are made in rather ad hoc, pragmatic and unsystematic ways" [2, p.19]. The aim of this article is to examine recent approaches to the measurement techniques of the social capital on the individual and group level.

Individual level measurement

The analysis of the social capital on the individual level is based, according to Nan Lin, on one of two elements: on the embedded resources or on the locations of individuals in a network as the key to social capital [3, p.36].

Identification of locations of individual nodes, as Lin stresses, helps to assess how close or how far the node is from strategic location that can give the access to the valued information [3, p. 36]. Network location measures include such elements as density, size, and distance. One of the most influential researches in this perspective was done by Robert Burt. His view on social capital or "social capital metaphor" means to the examination of social structure as a "kind of capital that creates a competitive advantage for certain individuals or groups in pursuing their ends [4,p.3]. Better connected people according to Burt enjoy higher returns. The main focus of the research is on the position of individuals inside social networks. Weak connections between groups are seen as holes in social structure [5, p.4]. These structural holes "create a competitive advantage for an individual whose relations span the holes and build bridges across cohesive groups" [5,p.5].

Burt describes social capital in terms of network's constraint which depends on three dimensions such as size, density and hierarchy [5, p.34]. It is assumed that smaller networks, dense networks and hierarchical networks are more constraining. The main hypothesis is that if networks span structural holes then they should have a negative association

with network's constraint. The study of senior managers in large electronics firm in the United States was carried out in order to check the hypothesis. Managers were asked to name [5, p.10]:

- The people with whom they discussed important personal matters most often,
- The people with whom they most often spend free time
- The person to whom they report in the firm
- Their most promising subordinate
- Their most valued contacts in the firm
- Essential sources of buying
- The most important contact for their continued success in the firm
- Their most difficult contact
- The people with whom they would discuss applying for a new job.

After naming contacts, respondents were asked about their relations with each other and the strength of the relations between contactors. Outcomes of research show that social capital can be built with the help of the large, sparse, non-hierarchical entrepreneurial networks or broker networks. Furthermore, social capital can be borrowed through hierarchical networks that have large structure fixed around the central contact [4, p.68].

The analysis of individual social capital from the perspective of embedded resources gives the opportunity to focus on the valued resources of others such as wealth, power, status and on the possibility of individuals to access them. Lin defines two types of embedded resources: 1) network resources and 2) contact resources [3, p.37]. Network resources include:

1. the range of resources between ties (or the "distance" between the highest and lowest valued resources)
2. the best possible resources in the networks or ties (or upper "reachability" in the resource hierarchy)
3. the variety or heterogeneity of resources in the networks
4. composition of resources (average or typical resources).

At the same time, contact resources indicate the valued resources represented by contacts that help in specific actions. Both types of resources help in achieving instrumental actions such as job search and others.

Lin shows that in each research only the theoretical basis of research may be the source for the measurement approach selection: "It would be ill-advised to simple use of any network measure as an indicator of social capital" [3, p.38]. Moreover, on the bases of measurement approach different kinds of research techniques can be observed. The most known techniques for the measurement of the individual social capital are: saturation survey, name generator, position generator, and resource generator. Let us look into the benefits of each technique.

Saturation technique is used when it is possible to map a definable social network [3, p.38]. It is used mainly for studies of social capital within an organization or a small network between organizations. This technique requires network to have a defined and manageable boundary. This survey allows doing a detailed and complete analysis of each network location and embedded resources in each node.

Name generator helps to identify ties of a person or list of names with whom a person discusses some issues or who helps a person in solving some problems. The questions such as "with whom do you usually discuss work problems?" or "with whom do you talk about personal matters?" are typically asked in order to build ego-network [6, p.5]. Lin marks a "personal-focus" of this methodology that helps to identify the network structure and density of personal contacts [7, p.8]. There are two types of Name generator that are used in the study of ego networks [7, p.7-8]: interpersonal generator and contextual generator. Interpersonal name generator gives information on the specific groups of close relations (neighbours, colleagues, relatives) of a person. Contextual generator allows to get general description of ego person of a social group. Name generator allows to identify specific content areas, gives the possibility of mapping ego-network locations and analyse social resources embedded in ego-network [3, p. 38]. At the same time Martin Vander Gaag points out some disadvantages of this technique as a social capital measurement. It is stressed that the number of names generated is limited to three or five which limits the range and scope of the reconstructed network. Furthermore, the data on weak, bridging ties of person cannot be obtained [8, p.5-6].

Position generator helps to identify hierarchical structure of connections to which person has access through social ties. Within this technique people are asked to indicate if they know anyone having a job or a position from the list of identified valued resources [3, p. 39]. The main advantages of this technique are the high degrees of reliability and validity [7, p8]. The list of positions can be adopted to different societies with different importance of job prestige or other positions what makes, according to Van der Gaag, this method is useful for the formation of the standardized measurement of social capital. As an example of Position generator applicability the results of the Social Networks of Dutch population 1999-2000 can be observed [6]. The most popular items of Position generator were a nurse, a teacher, a mechanic and a

director of a company. On the contrary, a trade union manager, an engine driver and a postman were the least accessed items. On average, family relationships gave access to more different and most popular occupations (6.39) comparing to acquaintances (5.19) and friends (3.35) according to the data [6 p. 9]. However, the authors pay attention to the inability of this generator to provide specific information about social resources that can be available through networks [8, p.6].

The Resource generator was introduced with the aim to overcome limitations of Name and Position generators. The general Resource generator question is whether the respondent knows anyone giving access to each of the items from the list or not. For Dutch population, the items such as owning a car, having personal computer skills, high education, help in time of illness and/or when people moving gained the main popularity. About 85 per cent stated that they know somebody giving access to such resources [8, p. 19].

Application of the three types of generators in the Dutch population survey were aimed to bring some standardization to the measurement of individual level social capital [9]. However, it turned out that each of the technique gives slightly different view on the social capital on individual level and retrieves information of different quality.

The selection of the measurement approach and research techniques have to be adjusted to specific topics and aims of study.

Group level measurement

The analysis of the differences in institution efficiency between Northern and Southern Italy by Putnam (1993) became a point of departure for many social capital researches.

In October 1996 the World Bank launched the Social Capital Initiative (SCI) that had three objectives [10, p.1]:

1. to assess the impact of social capital on the project effectiveness,
2. to identify ways in which outside assistance can help in the process of social capital formation,
3. to contribute to the development of indicators for monitoring social capital and methodologies for measuring its impact on development.

The SCI studies provide concrete evidence of the impact of social capital on the development in different regions. Krishna and Uphoff study [11] how the farmers in different villages manage the problem of building watersheds in Rajasthan. Sixty four villages are selected from four districts: Ajmer, Bhilwara, Rajsamand and Udaipur. The study shows that there are no significant connections between the development performance and the indicators of social capital used by Putnam (density of associations, participation in elections, newspaper readership) [11, p.27]. The social capital index based on structural and cognitive factors common for the region is developed as an outcome of this situation (informal networks, established roles, solidarity, mutual trust) [11, p. 27-28]. A special feature of the Rajasthan case was the absence of formal associations in the villages. Thus, the index included only informal networks and established roles. It means that this index, along with political competition and literacy, has a significant and positive association with watershed management.

Isham and Kahkonen study (1999) examines community-based water services in the Central Java province of Indonesia and analyzes if the social capital influence to the water projects. A number of indicators are constructed in order to measure social capital [12, p. 31]:

- Social capital index is based on Putnam index. This index is a multiplicative product of the "density of membership", the number of community groups to which a household belongs, and additive sub-index of group characteristics of each household's most important group, including heterogeneity of members by religion and ethnicity, heterogeneity of members and leaders, and participatory nature of decision-making mechanism.
- Meeting attendance is a household-level dichotomous variable which indicates whether the households take part in the activities of their favorite groups or not.
- Participation index based on the responses to two dichotomous variables: whether households reported that group members typically make decisions together in their group; and whether group leaders are elected by group members.

It occurs that in villages with high levels of social capital (villages with active groups and associations) households are accustomed to work together and the pipe water system is selected. Grootaert and Bastelaer pay attention to the two lessons that emerge from this study [10,p.13]:

1) the type of water delivery system most appropriate for a given community should be a function of the level of social capital in the community, as different technologies require different levels of collective actions;

2) the type of institution embodying social capital matters. In some villages, water users committees proved to be the best channel through which to coordinate use and maintenance of water system, in others did not.

The case study by Pargal, Huq and Gilligan [13] explores the characteristics of neighborhoods in Dhaka, Bangladesh where the communities organized successfully voluntary waste management services. The survey provided several measures of social capital: the measure of trust and the measures of norms of reciprocity and sharing. These measures based on the mean of the categorical scores of the individual households related to the number of questions [13, p.13].

The results of research show that these measures of social capital have different impact on community outcomes 13, p.19-20]. Reciprocity between neighbors is more important for cooperation for solid waste management than trust. The effect of sharing variables is nearly as large as reciprocity while trust is not an important determinant of waste management formation. It is interesting that the participation in civic associations is not associated with increasing trust or stronger norms of reciprocity and sharing. The authors conclude that social capital formation in Dhaka is not seen to be dependent on participation in civic associations [13,p.17].

The research of social capital on the community level do not limit to the World Bank Initiatives. Narrayan and Cassidy (2001) provide a comparative review of recent measurements. Various combination of the following dimensions, such as trust, membership in associations / participation in local communities, proactivity in social context, crime and safety, neighborhood connections, family and friend connections, tolerance of diversity, reciprocity, political engagement, subjective well-being are presented in this study.

Thus, Onyx and Bullen [1,p.61] as a part of New South Wales Study developed a practical measure of social capital for community organizations. They identify eight elements of social capital: participation in local community, neighborhood connections, family and friends connections, work connections, proactivity in social context, feeling of trust and safety, tolerance of diversity, value of life. The survey data on government institutions and policy did not appear to be related to other indicators of social capital [1,p.62].

Concerned with the decline of civic engagement in the USA, the National Commission of Civic Renewal identified five dimensions in the Index of National Civic Health. The five dimensions are: political engagement, trust, associational membership, security and crime, and family stability and integrity [1, p.63]. The study concludes that there is a consistent decline of civic participation over the last three decades in the USA.

Huge amount of researches on the mezzo level of community and macro level of country are based on comparison shows that there is no any kind of agreement on the measurement tool. Tom Healy distinguishes a number of ways in which the social capital study can be approached [14p.13]:

- Standardized questions on trust, civic engagement, social support networks in large-scale household surveys;
- Surveys of observed or reported human behavior such as Time-Use survey;
- Specific and contextual questions on relationships, attitudes and behavior in community or organizational-specific surveys;
- Case-study, qualitative or action-based research which seeks to explore the meaning and interpretation of social interaction in a particular situation or context;
- Randomized social experiments which seek to combine measurement with active intervention and "laboratory-simulated" conditions.

Krishna and Shrader [15] raise the question of the construction of a common method of measurement that can give a possibility to compare group social capital in different communities or societies. The idea of the Social Capital Assessment Tool (SCAT) is presented as a common method. The tool has three key components, which may be applied separately [15, p. 10]:

1) Community profile integrates participatory qualitative methods with a community survey instrument to identify features associated with social capital in this particular culture and institutional context.

2) Household survey includes thirty-nine close-ended items that relate to the structural dimensions of social capital and twenty one close-ended items that relate to its cognitive dimensions.

3) Organizational profile designed to delineate the relationships and networks that exist among formal and informal institutions.

Many scholars take the search of standard way of measurement into account. For example, Hjollund and Svendsen combined "trust" and "voluntary" indicators and included measure of relationship to the local area, networks and civic action in the proposed study of the differences of levels of social capital between Western and Eastern Europe [16,p.10]. Similar attempt done by Luke Keele [17] and Fabio Sabatini [18] concentrates on strong family ties, weak informal ties, voluntary organizations, and political participation.

However, as Healy stresses there are silent problems - the single index of social capital at the neighbourhood or wider community level may pick the impact of other variables. Moreover, one-period observations do not capture the whole picture and the absence of multilevel designs that can reflect the various levels of interaction within which individuals, families, neighbourhood and large entities are "nested".

In conclusion, the research shows that the selection of the measurement approach and research techniques have to be adjusted to specific topics and aims of study. On the individual level of analysis application of the Name generator, Resource generator and Position generator brings some standardization to the measurement. However, on the group level of study various combination of the dimensions, such as trust, membership in associations / participation in local

communities, proactivity in social context, crime and safety, neighborhood connections, family and friend connections, tolerance of diversity, reciprocity, political engagement, subjective well-being can be applied.

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